



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/685,782

10/16/2003

Tomohito Ota

023971-0323

7012

22428 7590 01/19/2007
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

POULOS, SANDRA K

ART UNIT

PAPER NUMBER

1714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/685,782

Applicant(s)

OTA ET AL.

Examiner

Sandra K. Poulos

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejections and objections except for those described below are overcome by applicant's amendment filed 10/24/06.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed 10/24/06. In particular, the claims have been amended to be further limited such that the selection of thermoplastic resin now excludes fluororesins. Thus the following action is properly made **FINAL**.

Election/Restrictions

2. Applicant's arguments are considered, however, the restriction requirement mailed 2/2/06 and made final in the previous Office action mailed 4/24/06 is maintained for the reasons set forth in paragraph 1 of the previous Office action. The inventions are independent or distinct for the reasons given the restriction requirement mailed 2/2/06 and there would be a serious burden on the examiner if restriction were not required because the inventions have acquired a separate status in the art in view of their different classification, thus restriction for examination purposes as indicated is proper.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1714

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 5, and 6 now recite "a thermoplastic resin other than a fluoro-resin", amended from the previous "a thermoplastic resin other than *the* fluoro-resin." It is the examiner's position that this phrase fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the phrase "a thermoplastic resin other than a fluoro-resin" (and thus exclusion of all fluoro-resins as the thermoplastic, not just the fluoro-resin described in the first part of the claim) in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. Applicant has not pointed to any portion of the specification, and examiner has not found any support for this phraseology in the specification as originally filed.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Seguchi (US 5,985,949).

Art Unit: 1714

The rejection is adequately set forth in paragraph 10 of Office action mailed 4/24/06 and is incorporated herein by reference.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seguchi as applied to claims 1-4 above, and further in view of JP 63/179965.

The rejection is adequately set forth in paragraph 13 of Office action mailed 4/24/06 and is incorporated herein by reference.

6. Claims 1-2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US 6,552,099) in view of Seguchi.

Yamamoto discloses a fluoro-resin heated at a temperature at or above the melting point of the resin is exposed in an inert gas atmosphere having an oxygen concentration of not more than 10 Torr (equal to 1.33 kPa) to an ionizing radiation at a radiation dose of 0.1 kGy to 10 MGy to prepare a crosslinked fluoro-resin (abstract). The crosslinked fluoro-resin is exposed to an ionizing radiation at a radiation dose of 10 kGy to 5 MGy, and is then brought into contact with a functional group-containing organic compound to cause a graft reaction (abstract; col 2, lines 14-35). A vacuum is applied to many of the examples (ex 1,-3). Yamamoto discloses that other polymer can be incorporated with the

Art Unit: 1714

fluororesin such as thermoplastic resins such as polyethyelene and polypropylene (col 5, lines 39-42).

Yamamoto does not disclose the amounts of fluororesin or thermoplastic.

Seguchi discloses a product having reduced friction and improved abrasion resistance comprising a formed resin containing at least one ionizing radiation irradiated fluorine-containing polymer (col 1, lines 36-53). The fluorine-containing polymer is preferably exposed to the ionizing radiation for a total dose of from 1 KGy to 10 MGy in the absence of oxygen. Other resins (non-irradiated) including thermoplastics are included in an amount of 1-100 weight percent. In Example 12, the irradiated PTFE is present in an amount of 10 wt% and the non-irradiated polymer is present in 90 wt%.

It would have been obvious to one of ordinary skill in the art to use the amounts given in Seguchi for the polymers Yamamoto in order to attain improved abrasion resistance (col 1, lines 35-67).

Response to Arguments

7. Applicant's arguments filed 10/24/06 have been fully considered but they are not persuasive.

Regarding Seguchi (US 5,985,949), applicant has argued that he does not disclose a fluororesin in an amount ranging from 5 to 40 parts by weight. Seguchi discloses 1 to 100 weight percent fluororesin (col 1, lines 39-40), and 10 weight percent in Example 12. Given that applicant claims 5 to 40 parts by weight fluororesin and 60 to 95 parts by weight thermoplastic, the fluororesin ranges

Art Unit: 1714

from a low of 5 weight percent and a high of 40 weight percent. The amount in Seguchi anticipates the currently claimed range.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SxP
Sandra Poulos

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700